

Applicant's invention is directed to diagnostic magnetic resonance imaging wherein the three dimensional position of a region of interest inside a patient is determined and the patient is then physically *moved in three dimensions* so that such region of interest is repositioned to lie substantially at the *center* of either the static or gradient magnetic field of the MRI system. In short, applicant's invention permits quick positioning of a desired region of treatment or diagnosis at the center of the gradient magnetic field and static magnetic field to enable the acquisition of highly precise high quality images with reduced image distortion, better uniformity, fewer fat artifacts, etc.

Boernert is directed to a method and apparatus for controlling the position of a movable RF coil in a magnetic resonance imaging apparatus. In particular, Boernert discloses a position detection system that detects the current position and orientation of a movable RF coil. With respect to the positioning of the region of interest, Boernert at best only teaches or suggests an approximate positioning of the region of interest at an imaging position based upon rough approximations. There is nothing in this reference that teaches or suggests actual mechanized repositioning of the patient region of interest so as to actually be positioned in three dimensions substantially at an optimum imaging position within the system, such as, for example, substantially the center of the static or gradient magnetic field.

The Office Action alleges that the teaching in Boernert at Col. 18, lines 15-24; Col. 6, lines 42-50; and Col. 9, lines 43-60, disclose or suggest the specifically claimed

feature of positioning a region of interest in substantially the center of the static or gradient magnetic field. This is simply incorrect. Boernert only teaches positioning the region of interest within a homogeneity volume. This is not the same as positioning a region of interest at substantially the center of the static or gradient magnetic field. The homogeneity volume encompasses much more than just the center of the static or gradient magnetic field. Applying the homogeneity volume in the manner suggested in the Office Action to read on the specifically claimed feature of positioning the region of interest at substantially a center of the static or magnetic field would be akin to contending that instructing someone to merely park in the parking lot of FedEx field discloses or suggests instructing someone to park in a specific space among the thousands that are available there. Boernert only teaches a very rough placement in the homogeneity volume and does not teach or suggest positioning within an optimum position within either the static or gradient magnetic field. Thus, Boernert is inapplicable because it only requires very rough positioning of the region of interest in the homogeneity volume of the magnetic field, with the MRI system of the claimed invention requires much more precise positioning of interest in an optimum position in the magnetic field.

In this connection, Boernert teaches that the table top 4 is movable along the Z-axis only. This is because Boernert is only concerned with relatively rough positioning (*i.e.*, within the homogeneity volume) as opposed to the precise three-dimensional

positioning of the claimed invention. In complete contrast, the claimed invention requires precise positioning of the region of interest, wherein the region of interest is *moved in three dimensions*. Thus, the patient couch of the claimed invention is movable in both the horizontal and vertical directions. In stark distinction, the patient table of Boernert can move only along the Z-axis. Accordingly, as set forth above, Boernert is very different from the claimed invention.

It is axiomatic that in order for a reference to anticipate a claim, the reference must disclose, teach or suggest each and every feature of the claim. As set forth above, Boernert fails to disclose or suggest each and every feature of the claimed invention. For example, there is no teaching or suggestion anywhere in Boernert of positioning a region of interest in substantially a center of the static or gradient magnetic field. As confirmation of this, Boernert fails to teach or suggest a patient couch that can move in both the horizontal and vertical directions. Therefore, Boernert fails to anticipate the claimed invention. Accordingly, reconsideration and withdrawal of the rejections are respectfully requested.

The rejection of claim 5 under 35 U.S.C. §103(a) over Boernert in view of Akgun (U.S. Patent No. 4,968,937) is respectfully traversed.

It is respectfully submitted that Akgun fails to overcome the fundamental deficiencies noted above with respect to Boernert. Therefore, even if, *arguendo*, the combination of Boernert and Akgun were proper, the combination nevertheless fails to

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render the claimed invention obvious. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

In view of the foregoing, it is respectfully submitted that the entire application is in condition for allowance. Favorable reconsideration of the application and prompt allowance of the claims are earnestly solicited.

Should the Examiner deem that further issues require resolution prior to allowance, the Examiner is invited to contact the undersigned attorney of record at the telephone number set forth below.

Respectfully submitted,

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